

In th Claims:

Please substitute and enter amended claims 1, 5, 8, 11, 19, 21 and 25 for previously pending claims 1, 5, 8, 11, 19, 21 and 25 as follows:

B₁ 1. (First Amended) A manufacturing fixture for manufacturing a magnet from a magnet powder, the magnet including a north pole, a south pole and a first region axis which extends between the north pole and the south pole, the manufacturing fixture comprising:

a fixture body including a fixture cavity for receiving the magnet powder, the fixture cavity having a cavity axis which is substantially parallel with the first region axis when the magnet is in the fixture cavity, the fixture cavity including a first region; and

an orientating device adapted to create a magnetic field having flux lines which extend through a portion of the fixture cavity, wherein a portion of the flux lines in the first region of the fixture cavity are substantially parallel to the cavity axis, and a portion of the flux lines outside of the first region of the fixture cavity are angled relative to the cavity axis.

B₂ 5. (First Amended) The fixture of claim 1 wherein a portion of the flux lines in the cavity fixture positioned near a cavity perimeter are angled relative to the cavity axis.

B₃ 8. (First Amended) The fixture of claim 1 wherein the fixture cavity includes an upper side and a lower side that are positioned substantially perpendicular to the cavity axis, and the orientating device includes a coil positioned near one of the sides of the fixture cavity.

11. (First Amended) A fixture for manufacturing a permanent magnet, the permanent magnet having a magnet body which is made of a magnet powder, the magnet body having a first segment which includes a first region and a second region, the first region having a first region axis which extends between a north pole and a south pole of the first region, the fixture comprising:

B4 a fixture body including a fixture cavity which is adapted to receive the magnet powder; and

an orientating device adapted for aligning a portion of the magnet powder in the fixture cavity to form a powder pattern in the magnet body having second region powder lines in at least a portion of the second region which are angled relative to the first region axis.

B5 19. (First Amended) The fixture of claim 11 wherein the fixture cavity includes an upper side and a lower side and the orientating device includes a coil positioned near one of the sides of the fixture cavity.

B6 21. (First Amended) A method for manufacturing a magnet from a magnet powder, the magnet including a north pole, a south pole and a first region axis which extends between the north pole and the south pole, the method comprising the step of:

providing a fixture cavity, the fixture cavity having a cavity axis which is substantially parallel with the first region axis when the magnet is in the fixture cavity;

positioning the magnet powder in the fixture cavity; and

creating flux lines which extend through a portion of the fixture cavity, wherein a portion of the flux lines in the fixture cavity are angled relative to the cavity axis and a portion of the flux lines in the fixture cavity are substantially parallel to the cavity axis.

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25. (First Amended) The method of claim 21 wherein the step of creating flux lines includes creating flux lines in the cavity fixture near a cavity perimeter which are angled relative to the cavity axis.

Please add new claims 40-60 as follows:

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40. (New) The fixture of claim 8 wherein the upper side and the lower side are substantially planar surfaces.

41. (New) The fixture of claim 8 wherein the upper side is substantially parallel to the lower side.

42. (New) The fixture of claim 11 wherein the orientating device is adapted to align a portion of the magnet powder so that the powder pattern has first region powder lines in at least a portion of the first region of the magnet, and wherein the orientating device is adapted to create flux lines which extend into the fixture cavity.

43. (New) The fixture of claim 11 wherein the fixture cavity has a cavity axis which is substantially parallel to the first region axis.

44. (New) The fixture of claim 43 wherein the fixture cavity includes a first cavity segment, a second cavity segment and a cavity transition between the first cavity segment and the second cavity segment, wherein a portion of the flux lines near the cavity transition extend approximately transversely to the cavity axis.

45. (New) The fixture of claim 44 wherein at least a portion of the flux lines in the fixture cavity are parallel to the cavity axis.

46. (New) The fixture of claim 45 wherein at least a portion of the flux

lines in the fixture cavity near a cavity perimeter of the fixture cavity are angled relative to the cavity axis.

47. (New) The fixture of claim 43 wherein at least a portion of the flux lines in the fixture cavity are parallel to the cavity axis, and wherein at least a portion of the flux lines in the cavity fixture near a cavity perimeter are angled relative to the cavity axis.

48. (New) The fixture of claim 19 wherein the upper side and the lower side are substantially planar surfaces.

49. (New) The fixture of claim 19 wherein the upper side is substantially parallel to the lower side.

50. (New) The fixture of claim 27 wherein the fixture cavity includes an upper side and a lower side that are positioned substantially perpendicular to the cavity axis, and the orientating device includes a coil positioned near one of the sides of the fixture cavity.

51. (New) The fixture of claim 50 wherein the orientating device includes a pair of spaced apart, adjacent coils positioned near one of the sides of the fixture cavity.

52. (New) The fixture of claim 27 including an upper punch that is positioned near the orientating device, the upper punch being adapted to move relative to the fixture body and compress the magnet powder in the fixture cavity.

B-8 53. (New) A manufacturing fixture for manufacturing a magnet from a magnet powder, the manufacturing fixture comprising:

a fixture body including a fixture cavity for receiving the magnet powder, the fixture cavity having a cavity axis, the fixture cavity including an upper side and a lower side that are positioned substantially perpendicular to the cavity axis, the upper side and the lower side being substantially planar; and

an orientating device adapted to create a magnetic field having flux lines which extend through a portion of the fixture cavity, wherein a portion of the flux lines in the fixture cavity are angled relative to the remaining flux lines in the fixture cavity.

54. (New) The fixture of claim 53 wherein a portion of the flux lines in the fixture cavity extend substantially transversely to at least a portion of the remaining flux lines in the fixture cavity.

55. (New) The fixture of claim 53 wherein the fixture cavity includes a first cavity segment, a second cavity segment and a cavity transition between the first cavity segment and the second cavity segment, wherein a portion of the flux lines near the cavity transition extend substantially transversely to at least a portion of the remaining flux lines in the fixture cavity.

56. (New) The fixture of claim 53 wherein the fixture cavity includes an upper side and a lower side and the orientating device includes a coil positioned near one of the sides of the fixture cavity.

57. (New) The fixture of claim 56 wherein the orientating device includes a pair of spaced apart, adjacent coils positioned near one of the sides of the fixture cavity.

58. (New) The fixture of claim 53 including an upper punch positioned near the orientating device, the upper punch being adapted to move relative to the fixture body and compress the magnet powder in the fixture cavity.

59. (New) A manufacturing fixture for manufacturing a magnet from a magnet powder, the magnet including a north pole, a south pole and a first region axis which extends between the north pole and the south pole, the manufacturing fixture comprising:

a fixture body including a fixture cavity for receiving the magnet powder, the fixture cavity having a cavity axis which is substantially parallel with the first region axis when the magnet is in the fixture cavity, the fixture cavity including a first cavity segment, a second cavity segment and a cavity transition between the first cavity segment and the second cavity segment; and

an orientating device adapted to create a magnetic field having flux lines which extend through a portion of the fixture cavity, wherein a portion of the flux lines in the fixture cavity are angled relative to the cavity axis, a portion of the flux lines near the cavity transition extend substantially transversely to the cavity axis, a portion of the flux lines in the fixture cavity are substantially parallel to the cavity axis, and a portion of the flux lines in the cavity fixture positioned near a cavity perimeter are angled relative to the cavity axis.

60. (New) The fixture of claim 59 wherein the fixture cavity includes an upper side and a lower side that are positioned substantially perpendicular to the cavity axis, the orientating device includes a pair of spaced apart, adjacent coils positioned near one of the sides of the fixture cavity, and the fixture includes an upper punch that is positioned near the orientating device, the upper punch being adapted to move relative to the fixture body and compress the magnet powder in the fixture cavity.

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Please cancel claims 4, 6, 7, 24 and 26 without prejudice.